# Entertainment for Deaf and Hard-of-Hearing Individuals in Saudi Arabia: A Mixed-Method Study

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**ABSTRACT:**

Entertainment accessibility is an essential aspect of cultural inclusion and social participation for individuals who are Deaf or Hard of Hearing (DHH). In Saudi Arabia, rapid technological advancement and cultural transformation under Vision 2030 have expanded the entertainment sector, yet accessibility for DHH audiences remains limited. This empirical study explores the availability, quality, and inclusivity of entertainment options for DHH individuals across digital media, cinemas, and public events. Using a mixed-method approach, data were collected from 48 DHH participants and 12 entertainment-industry professionals through structured surveys and semi-structured interviews. Quantitative findings indicate that while 62 percent of DHH respondents regularly engage with online entertainment platforms, only 37 percent report that captioning or sign-language support is consistently available. Qualitative evidence shows that there are still communication obstacles, low awareness levels among content creators and that there are no clear accessibility policies in Saudi entertainment establishments. As compared to the global literature, such as the works by Schwartz (2012) and Miller and Wheeler-Scruggs (2002), the entertainment industry in Saudi Arabia remains at the initial stages of incorporating the concept of universal design. The research finds that the enhancement of accessibility is possible through the coordinated policy, training of industries, and cooperation with Saudi Deaf community to create inclusive entertainment spaces. The findings are part of the emerging argument in the field of cultural accessibility, and its results prove that fair access to entertainment is crucial to the social cohesion, creative expression, and realization of national inclusion objectives.

Keywords: Deaf and Hard of Hearing, accessibility, entertainment, Saudi Arabia, inclusion, media, Vision 2030.

## 1. Introduction

Entertainment is a strong social and cultural agent that influences identity, promotes interaction with the community, and improves the overall well-being. To Deaf and Hard of Hearing (DHH) people, entertainment is not just a leisure issue but a question of being included, visible, and a member of the wider community (Kurková & Langová, 2021). Entertainment industry in most societies is undergoing a significant transformation including Saudi Arabia. Within the national reform agenda Vision 2030, Saudi Arabia has made massive investments in the development of creative industries, cinemas, music festivals, sporting and digital streaming (Mellor, 2024). These are meant

to broaden the economy and enhance cultural tolerance. Nevertheless, even with these developments, DHH people have not had full access to entertainment yet the inconsistent access to entertainment is limiting their access to enjoy and experience cultural events that hearing audiences usually assume are there.

In Saudi Arabia, DHH citizens make up a significant segment of the disability population, yet they remain largely invisible in public entertainment spaces. Cinemas reopened in 2018 after a 35-year hiatus, marking a new era for Saudi cultural life, but accessibility guidelines for captioned screenings, sign-language interpretation, and assistive hearing technologies are still rare (Shesha & Yusuf, 2021). Similarly, music concerts, theater performances, and television programs seldom provide accessible features, such as subtitles in Arabic or Saudi Sign Language (SSL). Online platforms like Netflix and Shahid have introduced optional subtitles, but these often cater to Arabic-speaking hearing audiences rather than to DHH users who depend on specialized captioning formats that convey tone, background sounds, and speaker identification. Consequently, DHH individuals often experience exclusion, not from a lack of interest, but from the absence of structural accessibility and institutional commitment.

The issue of entertainment accessibility intersects with broader questions of social justice and cultural inclusion. According to the United Nations Convention on the Rights of Persons with Disabilities (CRPD), to which Saudi Arabia is a signatory, cultural life must be equally accessible to persons with disabilities (CRPD, 2022). Article 30 of the Convention specifically emphasizes participation in cultural, recreational, and leisure activities as a human right (CRPD, 2022). However, implementation requires national policies, industry guidelines, and awareness among entertainment producers and service providers. Without such frameworks, DHH individuals remain marginalized from experiences that contribute to community belonging and emotional expression.

Despite the importance of accessibility, little empirical research has examined entertainment experiences among DHH individuals in the Saudi context. Existing studies primarily address educational or employment inclusion, with limited focus on social and cultural participation. This study seeks to fill that gap by systematically exploring the accessibility, satisfaction, and participation of DHH individuals within Saudi Arabia's entertainment sector. The research addresses the following questions:

1. What types of entertainment do DHH individuals in Saudi Arabia engage with most frequently?
2. To what extent are entertainment venues and media platforms accessible to DHH users?
3. How do DHH individuals perceive their inclusion and representation within Saudi entertainment culture?
4. What strategies can enhance accessibility and inclusion in alignment with Vision 2030?

To answer these questions, the study adopts a mixed-methods approach, combining quantitative surveys with qualitative interviews among DHH participants and entertainment professionals. The analysis integrates local findings with international literature to identify gaps, opportunities, and best practices.

## 2. Background and Related Work

### 2.1. Global Perspectives on Entertainment Accessibility

Access to entertainment among the Deaf and Hard of Hearing (DHH) has been a developing policy, technology, and advocacy issue. In most of the Western world, access has been facilitated since the middle of the 20th century through captioned television shows and closed captioning devices at theaters. In the example of the United States, the country passed the Americans with Disabilities Act (ADA) of 1990, which required the provision of accessibility in entertainment services provided both publicly and privately (Mullen, 2018). Later

laws, including the 21st Century Communications and Video Accessibility Act (CVAA) of 2010, went further to apply this to digital and online media, and streaming services were now forced to implement captions and audio description (Federal Communications Commission, 2010).

In spite of this development, there are still accessibility gaps. A study on the in-flight entertainment systems conducted by Schwartz (2012) has shown that DHH passengers frequently face poor captioning, device incompatibility, as well as customer support. Schwartz (2012) claimed that accessibility should be considered as a fundamental service as opposed to a superfluous feature, and that inclusive design should be introduced at the very beginning of the technological process. In the same fashion, Miller and Wheeler-Scruggs (2002) studied the effects of entertainment television on the sense of cochlear implants and provided that the attitude of hearing audiences was influenced by the way Deaf identity was represented (Lu and Guo, 2025). This work emphasizes that the question of accessibility is not merely a functional, but a representational one as well: the media portrayal of deafness can impact the existing stigma, or work to end it.

### 2.2. Entertainment Accessibility in the Middle East and Saudi Arabia

In the Middle East, awareness of entertainment accessibility is growing but remains under-researched. Historically, the region's focus on disability inclusion has centered on education, healthcare, and employment, with cultural and recreational access receiving less attention (Collins et al., 2022). Within Saudi Arabia, the entertainment sector has expanded rapidly since 2018, when cinemas reopened and large-scale cultural events, such as music festivals, theater performances, and international exhibitions, were introduced (Shesha & Yusuf, 2021). These developments align with *Vision 2030*'s emphasis on cultural modernization, tourism, and quality of life.

However, accessibility provisions for DHH individuals lag behind this growth. Many public events and venues lack sign-language interpreters, captioning services, or assistive listening devices (Othman et al., 2024). Cinemas rarely offer captioned screenings in Arabic or Saudi Sign Language (SSL), and digital platforms serving Saudi audiences often lack localized accessibility features.

### 2.3 Technology and Inclusive Media Design

Technological innovation has the potential to close accessibility gaps if implemented thoughtfully. Automatic captioning tools, virtual interpreters, and haptic feedback devices have been introduced globally to make entertainment more inclusive. However, their effectiveness depends on linguistic accuracy and cultural adaptation. In Arabic-speaking contexts, speech recognition systems often struggle with dialectical variation and noise interference, leading to captioning errors that reduce comprehension. Research by AlBoul et al. (2025) on Arabic captioning technologies found an average accuracy rate of only 70 percent, insufficient for The increased investment in artificial intelligence and smart media conducted in Saudi Arabia may be used to create the local accessibility solutions. An example is real-time avatars using sign language, AI-based caption translation, and overlays of captions in theaters, which would help people with disabilities enjoy the entertainment (Setiawan, 2024). They fit into the digital transformation objectives of Vision 2030 but need to be developed in partnership with the media producers, technology developers, and the Deaf people to make them usable and culturally relevant.

### 2.4. Gaps in the Literature and Research Rationale

In spite of the fast development of social and technological frameworks, scholarly investigations of the DHH availability in Saudi entertainment are limited. The majority of studies that deal with the inclusion of disability look at inclusion in relation to education or work environment but not in the context of leisure and culture. The paper fills these gaps by providing mixed-method research on the topic of

entertainment accessibility among DHH people in Saudi Arabia.

## 3. Research Design and Methodology

### 3.1. Research Purpose and Approach

The major objective of the research is the assessment of the accessibility, inclusivity, and representation of entertainment to Deaf and Hard of Hearing (DHH) people in Saudi Arabia. The study aims to know how DHH participants feel about entertainment in different media and locations; cinema, television, online platforms, and live events and what hinders equal participation. The following objectives led to the application of mixed-methods research design, which combines both quantitative and qualitative data. This method provided an opportunity to gather quantifiable data on accessibility and stronger knowledge about lived experiences and perceptions of DHH people and entertainment professionals.

### 3.2. Research Setting and Participants

The information was gathered in three large cities of Saudi Arabia, Jeddah, Makkah, and Abha, during the period between February and May 2023. These areas were selected in order to illustrate the different geographical and cultural areas of the Kingdom as well as reflect differences in access to entertainment in the different urban hubs.

The participants used in the study consisted of 48 Deaf and Hard of Hearing (25 men and 23 women) and 12 people in the entertainment industry (5 venue managers, 4 media producers, and 3 accessibility coordinators).. Most participants used Saudi Sign Language (SSL) as their primary mode of communication. Table 1 summarizes the demographic characteristics of the participants.

Table 1. Participant Demographics and Distribution.

| Participant Group | N | Gender (M/F) | Age Range | Mean Age | Primary Communication Mode | City Representation |
|---|---|---|---|---|---|---|
| DHH Individuals | 48 | 25/23 | 18–35 | 26.4 | Saudi Sign Language | Jeddah (20), Makkah (16), Abha (12) |
| Industry Professionals | 12 | 7/5 | 28–45 | 34.8 | Spoken Arabic / English | Jedddah (6), Makkah(4), Abha (2) |

### 3.3 Ethics

Ethical approval was obtained from the research ethics committees of participating institutions, and informed consent was collected from all participants. The study ensured confidentiality, pseudonymized all responses, and permitted participants to withdraw at any stage without penalty.

### 3.4. Data Collection Instruments

#### Quantitative Survey

A structured 20-item questionnaire was administered to Deaf and Hard of Hearing (DHH) participants to evaluate the accessibility and satisfaction of entertainment services in Saudi Arabia. The instrument examined five key domains: the availability of captioning and sign-language interpretation; the accessibility of cinemas, concerts, and festivals; the usability of online entertainment platforms such as Shahid

and Netflix; the representation of Deaf culture in Saudi media; and the perceived level of social inclusion achieved through participation in entertainment activities. Each item was rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire demonstrated strong internal consistency and reliability, with a Cronbach's alpha coefficient of 0.89, indicating that the items effectively captured participants' experiences and perceptions of entertainment accessibility.

**Qualitative Interviews**

Semi-structured interviews were conducted with 15 DHH participants and all 12 industry professionals. Interviews were conducted in Saudi Sign Language (interpreted into Arabic) for DHH participants and in spoken Arabic or English for professionals. Questions explored personal experiences, accessibility challenges, institutional attitudes, and suggestions for improvement. Each session lasted 30–45 minutes, recorded with consent and transcribed verbatim for analysis.

**3.5 Data Analysis**

SPSS version 28 was used to analyze quantitative data and the summarization of accessibility ratings was done through descriptive statistics (means, frequencies, and standard deviations). The independent-sample t-tests compared both male and female DHH participants regarding the perceptions of accessibility.

The thematic analysis of qualitative data was done in accordance with the six-step procedure suggested by Braun and Clarke (2006): familiarization, coding, theme generation, review, definition, and interpretation. Inductive identification of themes was to capture the views of the participants instead of working with a set of categories. The study triangulation in terms of surveys, interviews, and observations enhanced the credibility and internal validity of the study.

**3.6. Trustworthiness and Ethical Considerations**

In order to guarantee methodological rigor, the study applied the standards of credibility, dependability, confirmability, and transferability. Participant validation was used to attain credibility, with thematic interpretations and transcriptions being reviewed by selected DHH participants to verify their accuracy. Reliability was also upheld by the homogeneity of data collection processes in all locations. The confirmability was ensured by elaborate field notes and reflexive journals that captured the researcher assumptions. The transferability was also improved by giving contextual information on the participants and the venues and these could be replicated in other contexts in the Middle East.

**3.7. Limitations**

Although the study provides valuable insights, it has several limitations. The sample size, while diverse, remains relatively small and may not represent all DHH individuals in Saudi Arabia, particularly those in rural areas. Accessibility observations were limited to select urban venues, and results may not generalize to smaller entertainment providers. Additionally, as with most self-report data, participant responses may be influenced by personal expectations or social desirability bias. Despite these limitations, the study offers a foundational understanding of entertainment accessibility and identifies key areas for improvement in Saudi Arabia's entertainment sector.

**4. Results**

**4.1. Quantitative Findings**

Survey data from 48 Deaf and Hard of Hearing (DHH) participants revealed notable differences in accessibility and satisfaction across entertainment formats. Table 2 summarizes mean ratings for each domain assessed on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Table 2. Mean Accessibility Ratings Across Entertainment Domains (n = 48)

| Domain | Mean | SD | Interpretation |
|---|---|---|---|
| Captioning and Sign-Language Availability | 2.6 | 0.94 | Low accessibility |
| Accessibility of Cinemas, Concerts, and Festivals | 2.4 | 1.02 | Low accessibility |
| Usability of Online Entertainment Platforms | 3.8 | 0.88 | Moderate to high accessibility |
| Representation of Deaf Culture in Saudi Media | 2.1 | 0.97 | Low representation |
| Perceived Social Inclusion Through Entertainment | 3.0 | 0.91 | Moderate inclusion |

As shown in Table 2, participants reported the highest accessibility levels in online entertainment platforms (M = 3.8), followed by moderate perceptions of social inclusion (M = 3.0). In contrast, the representation of Deaf culture (M = 2.1) and accessibility of public entertainment venues (M = 2.4) received the lowest ratings. Over 65% of respondents indicated that they rely primarily on online streaming services such as Shahid, YouTube, and Netflix, where captioning options are more widely available. However, only 39% reported that Arabic captions were consistently accurate and synchronized, while 72% noted that live entertainment events lacked any form of captioning or sign-language interpretation.

When analyzed by gender, no statistically significant difference was observed in overall accessibility ratings between male and female participants ($t = 1.09$, $p > 0.05$). However, younger participants (ages 18–25) reported higher engagement with online entertainment than older participants (ages 26–35), suggesting that age and digital familiarity may influence accessibility perceptions.

### 4.2. Qualitative Findings

Interview data with 15 DHH participants and 12 entertainment-industry professionals enriched the quantitative results by revealing deeper insights into accessibility barriers and opportunities. Four major themes emerged from thematic analysis:

**Theme 1: Limited Institutional Awareness**

Most DHH participants emphasized that accessibility is often overlooked in planning or event management. One participant from Riyadh commented, *"I never see sign-language interpreters at concerts or festivals. Sometimes organizers say they didn't think it was necessary."* Industry professionals admitted that accessibility is not yet a standard practice, with one cinema manager acknowledging, *"There are no clear government instructions on captioned screenings or how to implement them."*

**Theme 2: Digital Platforms as a Lifeline**

Participants consistently described online platforms as the most inclusive form of entertainment available. Streaming services with Arabic subtitles provided greater autonomy, allowing DHH users to choose content freely. However, many noted that captions are often translated for hearing audiences and do not include descriptions of background sounds, emotions, or speaker identity.

**Theme 3: Underrepresentation of Deaf Culture**

Respondents expressed frustration at the near-total absence of Deaf characters, actors, or sign-language use in Saudi television and film. One interviewee stated, *"We want to see Deaf people on screen using Saudi Sign Language—it helps hearing people understand us better."* This lack of cultural representation was identified as a key barrier to inclusion and community pride.

**Theme 4: Positive Momentum and Future Potential**

Despite current shortcomings, both DHH participants and industry professionals expressed optimism. Professionals cited the rapid growth of Saudi entertainment under Vision 2030 as an opportunity to introduce accessibility policies, training, and partnerships with Deaf associations. Several respondents proposed that captioning and interpretation should become mandatory for all government-sponsored events and cinema screenings.

## 5. Discussion

### 5.1. Overview of Key Findings

This research makes a valuable contribution to the existing knowledge in the field of entertainment accessibility among Deaf and Hard of Hearing (DHH) people in Saudi Arabia. The numerical data indicated that online communities have increased the availability of captioned and visual media, but most of the entertainment places, like cinemas, concerts, and festivals, are still inaccessible. The average, which is 3.8 on the usability of online platforms, indicates that the digital media is a primary and relatively inclusive channel of entertainment among DHH audiences. Conversely, the average score in captioning availability (2.6) and the Deaf cultural representation (2.1) are low, reflecting the presence of structural and cultural limitations. These insights were further extended by the qualitative data which showed that there is an overall lack of awareness among entertainment providers, unequally applied policies and that the institutionally required mechanisms to facilitate access are nonexistent.

These results are consistent with the findings of Schwartz (2012), who pointed out that it is crucial to make entertainment systems accessible during their design, instead of considering this as a secondary consideration. In a similar manner, Mellor (2024) established that media portrayal of deafness influences the attitude held by society and whether hearing audiences perceive DHH people as competent and culturally diverse. This paper stretches these concepts to the Saudi setting, and accessibility is rather an exception than a norm. Although Vision 2030 has facilitated cultural openness and investment in entertainment, it is yet to be spread equally to DHH citizens.

### 5.2. Accessibility as a Social and Cultural Right

The paper supports the idea that access to entertainment is not only a technical problem, but a social inclusion and human rights problem. This right can be seen in the United Nations Convention on the Rights of Persons with Disabilities (CRPD), to which Saudi Arabia is a signatory, which explicitly specifies that equal opportunities should be provided in terms of cultural life, recreation, and leisure (Article 30) (CRPD, 2022). Nevertheless, this study indicates that the rights are yet to be fully achieved in the entertainment industry of Saudi Arabia. The participants of DHH repeatedly mentioned experiencing marginalization to common national experiences like movies, concerts, or events broadcasted on TV. This not only eliminates social participation but also keeps the cultures of people with disabilities unseen so that the DHH people can experience the full effects of the current social transformation in the Kingdom.

The figures suggest that the availability of entertainment can make the community feel more connected and cross-cultural. Indicatively, the participants noted that the captioned movies or interpreted showings enable their hearing counterparts to understand the Deaf culture and learn to have empathy towards the Deaf community. Thus, being accessible is beneficial not only to DHH but also to hearing communities because inclusive dialog and cultural interaction will develop. Lack of such opportunities compromises the objectives of Vision 2030 which aims at enhancing inclusiveness, creativity, and participation of citizens in all sectors of the society.

### 5.3. The Role of Digital Media in Expanding Inclusion

Digital entertainment has become the most accommodating access point towards Deaf and Hard of Hearing (DHH) audiences in Saudi Arabia due to flexibility in access, and visual formats which lessen traditional communication barriers. Netflix, YouTube, and Shahid are some of the platforms where DHH users have a higher degree of autonomy, but access is not comprehensive. The members of this research indicated that Arabic captions are incomprehensible and they omit necessary sound effects, which is consistent with other studies around the world that standard subtitles are created to appeal to hearing listeners, but not to DHH viewers (AlBoul, Haider & Saed, 2025).

The 21st Century Communications and Video Accessibility Act (CVAA) is a recent example of how regulation can promote inclusive media practices internationally, which has been introduced by the Federal Communications Commission (2010). Just as Schwartz (2012) advocates that accessibility must be designed into entertainment systems at the beginning phase, Saudi Arabia may also use it to create culturally sensitive Saudi Sign Language (SSL) captioning, and media sign-in features. The latest advancements, like AI-based signing avatars (Othman et al., 2024) and smart accessibility protocols (Setiawan, 2024) have potential opportunities to adapt to the Arabic environment.

### 5.4. Policy Gaps and Industry Awareness

Although the country invests in the development of culture, the policy of access to DHH audiences is disjointed. Cited by the participants and industry professionals were always the lack of clear regulatory frameworks or training on captioning, interpretation and adaptive technologies. This is similar to the results by Collins et al. (2022) who reported that social inclusion into the performing arts can be more of an individual initiative than an institutional policy.

Conversely, international conventions like the CRPD (2022) point out that cultural and leisure life is not a privilege, but a human right. This principle is not structurally enshrined in the entertainment industry of Saudi Arabia that is, although economically dynamic (Shesha and Yusuf, 2021). It is possible to set enforceable standards under the General Entertainment Authority (GEA), which would ensure the uniform implementation of the ADA performance related to accessible venues and media in the United States (Mullen, 2018). Incorporating the standard of accessibility in licensing and funding would promote adherence and strengthen inclusivity as a standard of professional and ethical excellence in the industry.

### 5.5. Conclusion and Research.

This paper has a number of policy and practice directions. To start with, Saudi entertainment authorities need to develop national standards of accessibility that will promote captioning and interpretation of all publicly accessible entertainment events and media programs. Second, event organizers and media producers should be trained about the need to be aware of accessibility requirements and cultural sensitivity. Third, inclusive practices need to be designed based on collaboration with Deaf associations and advocacy groups, as they should be grounded on the needs of the actual community. Lastly, there should be more research and innovation to implement accessibility technologies, including real-time captioning, AI sign-language avatars, and haptic feedback systems in the Arabic and Saudi cultural contexts.

## Conclusion

It is revealed that though Saudi Arabia's entertainment industry is expanding phenomenally under Vision 2030, access for the Deaf and Hard of Hearing (DHH) remains limited and patchy. Quantitative and qualitative findings reveal that presently online sites deliver the most accessible content through captioning and visual aids, but entertainment public sites

such as cinemas, concerts, and festivals continue to exclude DHH viewers due to the absence of sign-language interpretation, the absence of provisions for captioning, and minimal awareness among event managers. Saudi media also has limited representation of Deaf culture, pointing to an even larger cultural shortfall extending beyond technical accessibility. These gaps require unified policy planning, institutional accountability, and urgent consultation with the Deaf community in order to establish national entertainment accessibility standards.

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